REMARKS

Entry of this Amendment is proper because it narrows the issues on appeal and does not require further consideration and/or search by the Examiner.

Claims 1-22, all the claims presently pending in the application, stand rejected on prior art grounds. Claims 1, 5, 8, 9, 17 and 19 have been amended to more particularly point out the invention. Attached hereto is a marked-up version of the changes made to the claims by the current Amendment.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Specifically, claims 1, 2, 6-13, 17 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent Application EP 0 811 479 A2 in view of the Internet publication "Tyvek® for Packaging - Products" (hereinafter "the Tyvek® publication"). Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent Application EP 0 811 479 A2 and the Tyvek® publication. Claims 5 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent Application EP 0 630 755 A2 or Japanese Published Patent Application JP 9-295406 in view of European Patent Application EP 0 811 479 A2 and the Tyvek® publication. Claims 4, 14, 15 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over European Patent Application EP 0 811 479 A2 and the Tyvek® publication.

Further, claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent Application EP 0 811 479 A2 and the Tyvek® publication. Claim 21 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent Application EP 0 811 479 A2 and the Tyvek® publication. Claim 22 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent Application EP 0 811 479 A2 and the Tyvek® publication.

These rejections are respectfully traversed in view of the following discussion.

I. APPLICANT'S INVENTION

The claimed invention is directed to an air-permeable filter (and an ink cartridge having such a filter) which includes at least one porous material layer having at least one resin selected from the group consisting of fluororesin and polyolefin resin, and at least one air-permeable substrate layer having a tensile strength of 1 Mpa or more, having an outer surface bonded to said at least one porous material layer, and comprising ultrahigh molecular weight polyethylene. Applicant respectfully submits that an air-permeable filter including such an air-permeable substrate layer is not taught or suggested by any of the cited references. Importantly, the Gurley number of the air-permeable filter is less than 100 sec/100 ml.

Conventional ink cartridges include a polytetrafluoroethylene (PTFE) filter attached to an air vent to prevent ink from leaking through the vent. However, an increase or decrease in pressure in the ink cartridge may cause the filter to deform causing ink leakage.

The claimed filter, on the other hand, includes an air-permeable substrate layer having a tensile strength of 1 Mpa or more. Moreover, the claimed filter has a Gurley number less than 100 sec/100 ml. With the novel features of the claimed filter, "the difference in pressure between the interior and the exterior of the ink cartridge can be rapidly eliminated". Therefore, the claimed filter can minimize ink leakage.

II. THE PRIOR ART REFERENCES

A. The EP '479 and Tyvek® Publication References

The Examiner alleges that EP '479 and the Tyvek® publication would have been combined to form the claimed invention. Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

EP '479 discloses a battery separator membrane which includes a microporous polyolefin membrane and a polyolefin nonwoven fabric laminated on at least one surface of the microporous

polyolefin membrane. The composite membrane has a thickness of 25 to 200 μm, a porosity of 30 to 70%, an air permeability of 100 to 2000 sec/100cc and a surface opening area ratio of 50 to 90% on at least one outer surface thereof. The microporous polyolefin membrane comprises a matrix polyolefin component which is a polyolefin having a weight average molecular weight of 5×10^5 or more or a polyolefin mixture containing the polyolefin having a weight average molecular weight of 5×10^5 or more, and has a porosity of 30 to 95%, an air permeability of 100 to 2000 sec/100cc, an average open pore diameter of 0.001 to 1 μm and a tensile strength at break of 500 kg/cm^2 or more. The microporous polyolefin membrane may further comprise a shutdown polymer component to shut down the pores, thereby making the composite membrane impermeable. The polyolefin nonwoven fabric comprises fine fibers and has an air permeability of 0.1 to 100 sec/100cc and a basis weight of 5 to 50 g/m^2. The polyolefin nonwoven fabric prevents the composite membrane from melting down at a low temperature thereby preventing the short-circuit between the electrodes (EP '479 at Abstract).

The Tyvek® publication discloses various Tyvek® packaging materials and their physical properties. Specifically, the Tyvek® publication discloses the tensile strength and thickness for Tyvek® packaging materials 1422A and 1422R.

Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, these references are directed to different matters. Specifically, EP '479 is directed to a battery separator membrane (EP '479 at Abstract) whereas the Tyvek® publication is merely directed to the physical properties of packaging materials. Clearly, no person of ordinary skill in the art would consider combining the features of EP '479 with Tyvek® publication.

Further, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, the Examiner does not even attempt to support the combination by identifying any motivation or suggestion. Instead, the Examiner merely states that the Tyvek® publication is cited "only to provide the characteristics and properties of a material".

Moreover, neither EP '479 nor the Tyvek® publication teaches or suggests an air-permeable filter "wherein a Gurley number of said air-permeable filter is less than 100 sec/100

ml", as recited in claims 1, 5 and 17. As noted above, the claimed invention includes an air-permeable filter which may prevent ink from leaking through an air vent in an ink cartridge (Application at Figure 4; page 2, line 27-page 3, line 4). The air-permeable filter includes at least one air-permeable substrate layer having a tensile strength of 1 Mpa or more. (Application at page 10, lines 3-23). The air-permeable substrate layer has an outer surface bonded to the porous material layer (Application at Figure 4; page 10, line 27 to page 11, line 8). The Application explains that the complexing of the layers may be accomplished by stacking the two layers, heat-welding, ultrasonically welding, vibrationally welding, or by using an adhesive (Application at page 10, line 24-page 11, line 8).

As noted above, conventional ink cartridges include a polytetrafluoroethylene (PTFE) filter attached to an air vent to prevent ink from leaking through the vent (Application at page 2, lines 5-12). However, an increase or decrease in pressure in the ink cartridge may cause the filter to deform causing ink leakage (Application at page 4, lines 21-28).

The claimed filter, on the other hand, includes an air-permeable substrate layer having a tensile strength of 1 Mpa or more. Moreover, the claimed filter has a Gurley number less than 100 sec/100 ml (Application at page 5, lines 7-18). With the novel features of the claimed filter, "the difference in pressure between the interior and the exterior of the ink cartridge can be rapidly eliminated" (Application at page 5, lines 10-12). Therefore, the claimed filter can minimize ink leakage.

Clearly, neither EP '479 nor the Tyvek® publication teaches or suggests these novel features. Indeed, the Tyvek® publication merely discloses the physical properties of some particular materials (e.g., different types of Tyvek®). Thus, even assuming arguendo that the Tyvek® publication were to disclose some Gurley numbers, such numbers (if any) are merely numbers related to particular Tyvek® styles and not related to an air-permeable filter, as in the claimed invention. In other words, the Tyvek® publication does not teach or suggest an air-permeable filter having a Gurley number less than 100 sec/100 ml.

Moreover, EP '479 merely discloses a microporous polyolefin membrane with a polyolefin non-woven fabric on one surface of the membrane (EP '479 at Abstract). In other words, unlike

the claimed invention, EP '479 clearly does not disclose or suggest an air-permeable filter having a Gurley number less than 100 sec/100 ml.

Indeed, the Examiner concedes that EP '479 does not disclose an air-permeable filter having a Gurley number less than 100 sec/100 ml. However, the Examiner alleges that such a feature is obvious, stating "it would have been obvious to one of ordinary skill in the art ... to adjust the Gurley number of the filter to less than 100 sec/100 ml since one of ordinary skill in the art ... would have expected a filter having a Gurley number of slightly less than 100 sec/100 ml to exhibit roughly the same properties as a filter having a Gurley number of 100 sec/100 ml". However, Applicant submits that the Examiner is incorrect and that it clearly would not have been obvious to modify the EP '479 device to form the claimed invention with these novel features.

Specifically, Applicant submits that the Examiner neglects the fact that EP '479 is directed to a battery separator membrane which is completely different from the air-permeable filter (e.g., for an ink cartridge) of the claimed invention. Indeed, the battery separator membrane of EP '479 would likely not require the same air permeability characteristics as the claimed filter. Indeed, as noted above, the characteristics (e.g., Gurley number) of the air-permeable filter of the claimed invention is very important because they allow the difference in pressure between the interior and the exterior of the ink cartridge to be rapidly eliminated (Application at page 5, lines 10-12). There is no such concern for the battery separator membrane. Certainly, the EP '479 patent does not disclose or suggest any such problem that requires the battery separator membrane to have such a Gurley number as in the claimed invention.

Indeed, Applicant point out that EP '479 specifically states that the 100 sec/100 ml is an upper limit on the air permeability of the battery separator membrane. Moreover, the preferable air permeability is much higher than the 100 sec/100 ml figure upon which the Examiner relies. Specifically, EP '479 states that the air permeability of the membrane "is 100 to 1000 sec/100 cc, preferably 200 to 1500 sec/100 cc" (EP '479 at page 6, lines 22-23). Indeed, Tables 1 and 2 in EP '479 describe the membrane as having Gurley numbers ranging from 612 to 960 and 252 to 1010, respectively. Thus, Applicant submits that to modify the EP '479 reference to reach the claimed invention is clearly unreasonable and clearly contrary to the specifications of the battery

separator membrane set forth in the EP '479 patent.

Further, the Examiner's assertion that one would have expected a filter having a Gurley number slightly less than 100 sec/100 ml to exhibit roughly the same properties as a filter having a Gurley number of 100 sec/100 ml is clearly unreasonable. Indeed, the Examiner is basically stating that the limits set by the reference are meaningless.

Indeed, it should be noted that the EP '479 reference does not use terms such as "about" or "approximately". Instead, the EP '479 reference clearly sets forth a range so that the upper and lower limits of the range are clearly identified. This clearly evidences that the issue has been thoughtfully considered and the limits of the range should be respected by the Examiner.

Therefore, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

B. The Scarmoutzos and Shen references

The Examiner alleges that EP '479 and the Tyvek® publication would have been combined with Scarmoutzos or Shen to form the claimed invention (e.g., as claimed in claims 3, 20 and 21). Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Scarmoutzos discloses a hydrophobie polymeric membrane composite. Specifically, the membrane is formed from a porous polymeric substrate having its entire surface modified with a cross-linked polymer which results in a hydrophobic and oleophobic surface (Scartmoutzos at Abstract).

Shen discloses fluorinated acrylic monomers containing urethane groups and their polymers. Such polymers are allegedly useful to coat onto substrates to impart oil and water repellency (Shen at Abstract).

However, Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, these references are directed to different matters. Specifically,

as noted above, EP '479 is directed to a battery separator membrane (EP '479 at Abstract), and the Tyvek® publication is merely directed to the physical properties of packaging materials, whereas Scarmoutzos is intended to provide a membrane which can be used as a seal for organic and aqueous liquids and as a gas filter (Scarmoutzos at col. 6, lines 15-17) and Shen is intended to provide a oil and water repellent coating. Clearly, no person of ordinary skill in art would consider combining the features of such divergent references.

Further, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, the Examiner attempts to support the combination by stating that "it would have been obvious to one of ordinary skill in the art ... to incorporate the water-repellency and oil-repellency of Scarmoutzos et al. or Shen et al. into the air-permeable layers of the filter of European Patent Application EP 0811479 A2 and the internet publication "Tyvek ® for Packaging - Products" to prevent water and organic solvents from passing through the filter" which is merely conclusory and insufficient to support the combination.

Indeed, Applicant would point out that it is very unlikely that one of ordinary skill in the art would consider modifying a battery separator membrane (e.g., as in the EP '479 patent) to make it repellent to water and solvents, as suggested by the Examiner.

Moreover, Applicant submits that neither Scarmoutzos nor Shen, like EP '479 and the Tyvek® publication, teaches or suggests an air-permeable filter "wherein a Gurley number of said air-permeable filter is less than 100 sec/100 ml", as recited in claims 1, 5 and 17. As explained above, the Application states that conventional ink cartridges include a polytetrafluoroethylene (PTFE) filter attached to an air vent to prevent ink from leaking through the vent (Application at page 2, lines 5-12). However, an increase or decrease in pressure in the ink cartridge may cause the filter to deform causing ink leakage (Application at page 4, lines 21-28).

The claimed filter, on the other hand, includes an air-permeable substrate layer having a tensile strength of 1 Mpa or more. Moreover, the claimed filter has a Gurley number less than 100 sec/100 ml (Application at page 5, lines 7-18). With the novel features of the claimed filter, "the difference in pressure between the interior and the exterior of the ink cartridge can be rapidly

eliminated" (Application at page 5, lines 10-12). Therefore, the claimed filter can minimize ink leakage.

Clearly, neither Scarmoutzos nor Shen teaches or suggests these novel features. Indeed, as noted above, Scarmoutzos merely discloses a membrane formed from a porous polymeric substrate having its entire surface modified with a cross-linked polymer which results in a hydrophobic and oleophobic surface (Scartmoutzos at Abstract). Similarly, Shen merely discloses fluorinated acrylic monomers containing urethane groups and their polymers (Shen at Abstract).

In other words, these references fail to disclose an air-permeable filter, let alone an air permeable filter having a Gurley number less than 100 sec/100 ml as in the claimed invention. Therefore, neither of these references makes up for the deficiencies in the EP '479 patent and the Tyvek® publication.

Therefore, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

C. The EP 755 and JP '406 References

The Examiner alleges that the either the EP 755 reference or the JP '406 reference would have been combined with the EP '479 patent and the Tyvek® publication to form the claimed invention (e.g., as claimed in claims 5 and 16). Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

EP '755 discloses a discharge recovery process for an ink jet recording apparatus which forms an image on the recording medium by discharging the ink. The invention aims to prevent the increase in the running costs and the shortened life of a waste ink tank by preventing the wasteful ink consumption which may be caused by the dual use of an automatic recovery processing and a manual recovery processing after the replacement of an ink tank. Also, the invention further aims to provide an ink jet recording apparatus with high safety and reliability as well as effecting an appropriate recovery by controlling the movement of head in involving the

recovery (EP '755 at Abstract).

JP '406 discloses in a hydrophobic film unit 100, the whole of the outer peripheral end part of a circular hydrophobic film 101 is covered with a resin member 102 formed by insert molding and the resin member 102 itself has an annular shape having a square cross section. An ultrasonic fusion rib 103 is provided to one surface of the annular part of the resin member 102 in a circular shape and this hydrophobic film unit 100 is fixed to the atmosphere communication hole part of an ink tank by welding the resin member 102 (especially the part of the rib 103) and a resin constituting at least peripheral part of the atmosphere communication port of the ink tank. Or, in the hydrophobic film unit 100, the whole of the outer peripheral end part of the circular hydrophobic film 101 is covered with an annular elastic member having an oval cross section formed by insert molding (JP '406 at Abstract).

However, Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, these references are directed to totally different matters. Specifically, EP 755 is directed to a discharge recovery process for an ink jet recording apparatus, and JP '406 is directed to a hydrophobic film unit, whereas EP '479 is directed to a battery separator membrane (EP '479 at Abstract), and the Tyvek® publication is merely directed to the physical properties of packaging materials. Clearly, no person of ordinary skill in the art would have considered combining the features of EP '755 or JP '406 with EP '479 and the Tyvek® publication.

Further, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, the Examiner supports the combination by merely stating that "[i]t would have been obvious ... to incorporate the air-permeable filters of EP 0 811 479 A2 and the internet publication " Tyvek® for Packaging - Products" into the ink cartridges of EP 0 630 755 A2 or JP 9-295406 to provide vent filters for the ink cartridges having good mechanical rigidity to prevent the filters from being damaged in transit to prevent ink from being lost from the cartridge" which is insufficient to support the combination.

Moreover, Applicant submits that like EP '479, the Tyvek® publication, Scarmoutzos and Shen, neither EP '755 nor JP '406 teaches or suggests an air-permeable filter "wherein a Gurley number of said air-permeable filter is less than 100 sec/100 ml" as recited in claims 1, 5 and 17. As explained above, unlike conventional filters (e.g., for an ink cartridge), the claimed filter includes an air-permeable substrate layer having a tensile strength of 1 Mpa or more. Moreover, the claimed filter has a Gurley number less than 100 sec/100 ml (Application at page 5, lines 7-18). With the novel features of the claimed filter, "the difference in pressure between the interior and the exterior of the ink cartridge can be rapidly eliminated" (Application at page 5, lines 10-12). Therefore, the claimed filter can minimize ink leakage.

Clearly, neither EP '755 nor JP '406 teaches or suggests these novel features. Indeed, as noted above, EP '755 merely discloses a discharge recovery process for an ink jet recording apparatus (EP '755 at Abstract). In other words, EP '755 fails to disclose an air-permeable filter, let alone an air permeable filter having a Gurley number less than 100 sec/100 ml as in the claimed invention. Therefore, EP '755 clearly does not make up for the deficiencies in the EP '479 patent and the Tyvek® publication.

Further, even if JP '406 is intended to prevent ink leakage in an ink jet printing cartridge, JP '406 is clearly unrelated to the air permeable filter of the claimed invention. Indeed to accomplish its objectives, JP '406 teaches covering a outer peripheral end part of a circular hydrophobic film 101 with a resin member 102 having an annular shape. In other words, JP '406 fails to disclose or suggest an air permeable filter having at least one porous material layer and at least one air-permeable substrate. Further, JP '406 certainly fails to disclose or suggest an air permeable filter having a Gurley number less than 100 sec/100 ml, as in the claimed invention. Therefore, EP '755 clearly does not make up for the deficiencies in the EP '479 patent and the Tyvek® publication.

Therefore, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

D. The JP '318 Reference

The Examiner alleges that EP '479, the Tyvek® publication and Scarmoutzos would have been combined with JP '318 to form the claimed invention (e.g., as claimed in claims 4, 14, 15 and 18). Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

JP '318 merely discloses premixed fine particles composed of at least one kind of polymer selected from polytetrafluoroethylene, a tetrafluoroethylene/hexafluoropropylene copolymer and polyvinylidene fluoride are bonded to the voids on the surface side of a permeable porous substrate obtained by sintering and molding graphy ultrahigh mol.wt. polyethylene (JP '318 at Abstract).

However, Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, these references are directed to different matters. Specifically, as noted above, EP '479 is directed to a battery separator membrane (EP '479 at Abstract), the Tyvek® publication is directed to the physical properties of packaging materials, and Scarmoutzos is intended to provide a membrane which can be used as a seal for organic and aqueous liquids and as a gas filter (Scarmoutzos at col. 6, lines 15-17), whereas JP '318 is merely directed to a sintered plastic filter. Clearly, no person of ordinary skill in art would consider combining the features of such divergent references.

Further, Applicant submits that the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, the Examiner attempts to support the combination by stating that "it would have been obvious ... to substitute the porous polytetrafluoroethylene material of Scarmoutzos et al. for the porous polyethylene material of EP 0811 479 A2 in that such are alternate materials in the art for forming porous material layers" which is insufficient to support the combination.

Moreover, like the aforementioned references, JP '318 does not teach or suggest an air-permeable filter "wherein a Gurley number of said air-permeable filter is less than 100 sec/100 ml", as recited in claims 1, 5 and 17. As explained above, unlike conventional filters (e.g., ink

cartridge air filters) the claimed filter has a Gurley number less than 100 sec/100 ml (Application at page 5, lines 7-18). With the novel features of the claimed filter, "the difference in pressure between the interior and the exterior of the ink cartridge can be rapidly eliminated" (Application at page 5, lines 10-12). Therefore, the claimed filter can minimize ink leakage.

Clearly, JP '318 does not teach or suggest these novel features. Indeed, JP '318 merely discloses a sintered polyethylene substrate and fine particles bonded to the voids of the substrate. In other words, JP '318 fails to disclose an air-permeable filter having a porous material layer, let alone an air permeable filter having a Gurley number less than 100 sec/100 ml as in the claimed invention. Therefore, JP '318 clearly does not make up for the deficiencies in the EP '479 patent, the Tyvek® publication, and the Scarmoutzos patent.

Therefore, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

E. The Miksch Reference

The Examiner alleges that EP '479 and the Tyvek® publication would have been combined with Miksch to form the claimed invention (e.g., as claimed in claim 22). Applicant submits, however, that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention.

Miksch discloses a gaseous contaminant dosimeter for collecting a gaseous contaminant. The dosimeter includes a porous diffusive material through which a contaminant may diffuse. The porous diffusive material includes at least two layers of membrane material mounted to the opposite sides of a porous support substrate (Miksch at Abstract).

However, Applicant submits that these references would not have been combined as alleged by the Examiner. Indeed, these references are directed to different matters. Specifically, as noted above, EP '479 is directed to a battery separator membrane (EP '479 at Abstract), and the Tyvek® publication is merely directed to the physical properties of packaging materials, whereas Miksch is directed to a gaseous contaminant dosimeter. Clearly, no person of ordinary

skill in art would consider combining the features of such divergent references.

Further, the Examiner can point to no motivation or suggestion in the references to urge the combination as alleged by the Examiner. Indeed, the Examiner attempts to support the combination by stating that it would have been obvious to "incorporate the two porous material layers of Miksch into the filter of European Patent Application EP0 811 479 A2 and the internet publication "Tyvek ® for Packaging - Products" to provide a filter having improved filtration efficiency and to provide a symmetrical filter that can be installed in either direction to prevent the users of the filters from inadvertently installing the filter in an improper direction" which is insufficient to support the combination.

Moreover, the Miksch reference does not teach or suggest an air-permeable filter "wherein a Gurley number of said air-permeable filter is less than 100 sec/100 ml", as recited in claims 1, 5 and 17. As explained above, with the novel features of the claimed filter, "the difference in pressure between the interior and the exterior of the ink cartridge can be rapidly eliminated" (Application at page 5, lines 10-12). Therefore, the claimed filter can minimize ink leakage.

Clearly, the Miksch reference does not teach or suggest these novel features. Indeed, as noted above, Miksch merely discloses a gaseous contaminant dosimeter having a porous diffusive material with at least two layers of membrane material mounted to the opposite sides of a porous support substrate (Miksch at Abstract). In other words, the Miksch dosimeter is completely unrelated to the air permeable filter (e.g., for an ink cartridge) of the claimed invention.

Further, the Examiner attempts to equate the membranes 37 of Miksch with the porous material of the claimed invention, and the core layer 11 of Miksch with the air permeable substrate of the claimed invention (Miksch at Figure 1). However, nowhere does Miksch disclose or suggest the novel features of the claimed invention (e.g., an air-permeable substrate layer having a tensile strength of 1MPa or more). Moreover, Miksch clearly does not disclose an air permeable filter having a Gurley number less than 100 sec/100 ml, as in the claimed invention. Therefore, Miksch does not make up for the deficiencies in the EP '479 patent and the Tyvek® publication.

Therefore, Applicant submits that these references would not have been combined and even if combined, the combination would not teach or suggest each and every element of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

III. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 1-22, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 1/10/03

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CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that the foregoing Amendment was filed by facsimile with the United States Patent and Trademark Office, Examiner Jason Greene, Group Art Unit # 1724 at fax number 703-872-9311 this 10th day of January, 2003.

Phillip E. Miller
Reg. No. 46,060

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend the claims to read as follows:

1. (Twice Amended) An air-permeable filter for an ink cartridge, said air-permeable filter comprising:

a laminate comprising:

at least one porous material layer comprising at least one resin selected from the group consisting of fluororesin and polyolefin resin; and

at least one air-permeable substrate layer having a tensile strength of 1 MPa or more, and having an outer surface bonded to said at least one porous material layer,

wherein a Gurley number of said air-permeable filter is less than 100 sec/100 ml.

5. (Twice Amended) An ink cartridge comprising:

a case for receiving an ink;

at least one air vent in said case; and

an air-permeable filter provided in said at least one air vent, said air-permeable filter comprising:

a laminate comprising:

at least one porous material layer comprising at least one resin selected from the group consisting of fluororesin and polyolefin resin; and

at least one air-permeable substrate layer having a tensile strength of 1 MPa or more, and having an outer surface bonded to said at least one porous material layer,

wherein a Gurley number of said air-permeable filter is less than 100 sec/100 ml.

8. (Twice Amended) The air-permeable filter for an ink cartridge according to claim 2, wherein the Gurley number of the air-permeable filter is from 0.1 sec/100 ml to less than100 sec/100 ml [300 sec/100 ml].

9. (Twice Amended) The air-permeable filter for an ink cartridge according to claim 8, wherein the Gurley number of the air-permeable filter is from 0.5 sec/100 ml to less than 100 sec/100 ml.

17. (Amended) An air-permeable filter comprising:

at least one porous material layer comprising at least one of fluororesin and polyolefin resin; and

at least one air-permeable substrate layer having a tensile strength of 1 MPa or more, and having an outer surface bonded to said at least one porous material layer,

wherein a Gurley number of said air-permeable filter is less than 100 sec/100 ml.

19. (Amended) The air-permeable filter according to claim 17, wherein a Gurley number of the air-permeable filter is from 0.5 sec/100ml to less than 100 sec/100 ml.